

REMARKS

This is in response to the Office Action that was mailed on July 21, 2006. Various typographical errors are corrected in the specification. The range of molar ratios of Mg/Al and of alkoxy/Al are amended in claim 1, based upon such disclosure as that in lines 6-16 on page 7 of the specification. No new matter is introduced by this Amendment. Claims 1-9 remain pending in the application, of which claims 4-9 are withdrawn from consideration on their merits.

Specification

Objection was raised to the specification. The Examiner objected to the use of Japanese characters on page 8 of the specification. That objection was obviated by a Preliminary Amendment filed concurrently with the present application, which deleted the Japanese characters and replaced them with the formula AlR_nX_{3-n} . The Examiner requested correction of minor errors in the specification. Minor errors in the specification are corrected by this Amendment. It is respectfully submitted that the specification in its present form is therefore not objectionable.

Prior art

Claims 1-3 were rejected under 35 USC §102(a) as being unpatentable over US 5,091,353 to Kioka et al. (Kioka). The rejection is respectfully traversed.

THE INVENTION. The present invention provides a carrier component for olefin polymerization catalysts in which the molar ratio of magnesium atom to aluminum atom (Mg/Al) is in the range of 40 to 150 and the molar ratio of alkoxy group to aluminum atom (alkoxy group/Al) is in the range of 0.2 to 2.0. The catalyst carrier of this invention enables a high degree of olefin polymerization activity without the need for expensive organoaluminum oxy compounds or organoboron compounds. Moreover, the catalyst carrier of this invention enables the retention of a high level of catalytic polymerization activity over a long period of time. The Declaration under 37 CFR 1.132 of Yasushi Nakayama enclosed herewith provides evidence of beneficial properties of the present invention. As can be seen from the Declaration, carrier

components in which the alkoxy group/Al molar ratio exceeds 2.0 provide markedly lower olefin polymerization activity.

THE KIOKA REFERENCE. Kioka discloses magnesium/aluminum solid complex supports. However, Kioka teaches that a preferable molar ratio of Mg/Al is in the range of 1 to 20. This is because the reverse molar ratio, of Al/Mg, is in the range of 0.5 to 1 in line 31 of column 7. Also, Kioka discloses a molar ratio of alkoxy group/Al in the range of 2.9 to 4.7 in Table 1. Thus Kioka fails to teach the Mg/Al ratio and the alkoxy group/Al ratio that characterizes the invention of claim 1 hereinabove.

Moreover, with respect to the Examples in Kioka, Figure 1 in Exhibit A attached hereto shows a plot of olefin polymerization activity as a function of the molar ratio of Al/Mg, and Figure 2 in Exhibit A shows a plot of the olefin polymerization activity as a function of the molar ratio of alkoxy group/Al. Kioka fails to suggest that the specific Mg/Al ratio or the specific alkoxy group/Al ratio of Applicants' claim 1 would provide high olefin polymerization activity. Accordingly, it is manifest that the present invention is not obvious from the Kioka disclosure.

With further respect to the Examples in Kioka, Figure 3 in Exhibit B attached hereto shows a plot of the molar ratio of Al/Mg as a function of the molar ratio of alkoxy group/Al. Clearly there is no correlation between the molar ratio of Al/Mg and the molar ratio of Al/Mg in Kioka. Thus Kioka fails to suggest the specific Al/Mg ratio and the specific alkoxy group/Al ratio recited in Applicants' claim 1.

CONCLUSION. In view of the above evidence and arguments, it is clear that the Kioka reference does not establish a *prima facie* case of obviousness against any of claims 1-3 herein. Withdrawal of the rejection of record is earnestly solicited.

Contact

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard Gallagher, Registration

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No. 28,781, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

AG By  # 42,874

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